ZyXEL

Digital Living

Home Multimedia becomes a reality!

Consumer Product Guide 2008

Spring

Digital Living

Home Multimedia becomes a reality!

With the increase demands for consumer to have home entertainment centres or home office working, ZyXEL has a range of of high-quality, secure and stylish products, that helps them to to create a universal multimedia entertainment experience through the Home Multimedia Center. This will satisfy the demands for home entertainment or home office working. Join the trend to create your incredible entertainment lifestyle in the right way: the ZyXEL way.

High-Speed Powerline from the roof down to the basement everything from the computer to the HDTV in your home can be linked to the HomePlug Turbo/AV network backbone, simply plug it in and your existing electrical power sockets become a network connection point. There is no need for unsightly cables around your home—your electrical supply will be unaffected as you use the ultra-fast network structure you already have.

Evolving 802.11n Technology

Wireless networks now have even better coverage and reach through floors, walls and furnitures as the MIMO (Multiple Input Multiple Output) wireless has evolved to 802.11n. This eliminates any dead spots in the house, so you have more freedom to fulfill your information needs wherever you are in the home.

Welcome to the New Family Home Network Media Center

Now with the latest home network solutions, you can unwind and indulge yourself with finest-quality digital photos, high-definition videos and music on your HDTV or High-Fidelity audio system. The high-speed home network created with Powerline technology, coupled with Home Network Storage and Digital Media Adapter, enables you to send and stream content all around the home.

Delivering an Improved Gaming Experience

With the increase in multiple on-line gaming communities, Powerline can eliminate the lag and drop out that can occur with wireless creating an improved gaming experience.

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12 Digital Media Adapter

Are you looking for a solution to network PCs, media adapters and centrally stored data? With ZyXEL's Powerline adapter, it's easy to transmit multimedia data over the current network with amazingly high speed.

Entertainment in the Comfort of Your Living Room

With ZyXEL Digital Media Adapter series, files are transferred from your computer to the TV or stereo via the LAN or USB ports or by using your PowerLine home network. The ZyXEL Digital Media Adapter series allows you to get files from a computer hard disk and display photos/video on large-screen TVs or home stereo systems. No longer are you confined to viewing images on a personal computer. The Digital Media Adapter Series lets you truly utilize your home entertainment system and share video, photos and music with your friends and family in the comfort of the living room.

Enjoy Next-Generation Multimedia Lifestyle

The ZyXEL Powerline AV Series provides transmission rates of up to full 200 Mbps** as well as advanced Quality of Service (QoS) technology for your multimedia lifestyle. The advanced QoS technology controls data flow automatically and guarantees excellent multimedia performance, allowing users to enjoy delay-sensitive media streaming applications such as VoIP or IPTV.

Enjoy peace of mind!

Using a centralised ZyXEL Network Attached Storage Server gives you peace of mind with the ability to be able to back up all your important files and provides a multimedia file so digital streamers can retrieve information and ensure your multimedia content is automatically correctly filed and categorised.

ZyXEL Network Attached Storage Server can work independently from your PC or Laptop so when streaming movies or music your computer doesn't have to be turned on.

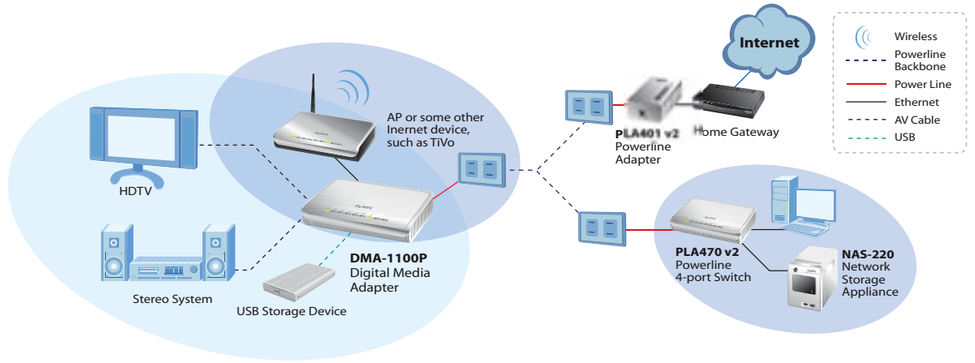
DLNA Stands for Digital Living Network Alliance

DLNA is a new technology standard created by leading consumer electronic, PC and mobile handset companies.

With DLNA technology, new digital entertainment devices are compatible and work together on your home network, allowing seamless sharing of videos, photos and music.

*** Data in theory. Actual throughput and transmission range depend on interference in your household power circuit and the quality of the electrical installation.*

Digital Entertainment
Application Scenario



PLA401 v2
Powerline Ethernet Adapter

Part Number (STD): 91-014-031001B

- Data transmission rates of up to 200 Mbps over Powerline
- Simple Direct Plug Design
- HomePlug AV compliant
- HomePlug Instant Encryption Button
- Multi-colored LED to indicate data transmission rates over Powerline

DMA-1100P
HomePlug AV Digital Media Adapter

Part Number (STD): 91-014-026001B

- High-definition audio and video streaming support
- Listen to MP3 and digital music collection through the stereo system
- Browse digital pictures in JPEG, GIF, TIF, BMP and PNG formats on TV
- Select graphical on-screen menu with the IR remote control
- Built-in USB 2.0 for portable memory devices
- HomePlug built-in

PLA-400 v2
Powerline Ethernet Adapter

Part Number (STD): 91-014-024001B

- Data transmission rates of up to 200 Mbps over Powerline
- Stylish desktop design with universal power cord
- HomePlug AV Certified
- HomePlug instant encryption button
- Multi-colored LED to indicate data transmission rates over powerline

NSA-220
Network Storage Appliance

Part Number (STD): 91-016-006001B

- 2-bay network attached storage home server with up to 2TB capacity large enough for storing 500,000 songs, 800 hours of DVD quality videos and 568,000 photographs*
- DLNA certified home multimedia server
- Embedded FTP/Web/Backup/Printer Server available
- RAID 0, 1 data protection support
- Windows PC instant backup support
- Built-in with P2P/HTTP/FTP & Broadcatching Download service

*: Songs: Up to 500,000 songs. (MP3) (based on 4 minutes per song, 128 kbps rate)
Videos: Up to 800 hours of DVD quality video. (based on data rate of 5Mb per second, 2.25 GB per hour)
Photographs: Up to 568,000 digital photos. (based on 3.5 MB per photo)

Integrating Voice & Data Networks

As more and more households purchase a second PC or laptop for family members, a router is required to building a network so home computers can communicate smoothly. This also ensures the performance of modern applications such as VoIP (Voice over Internet Protocol) telephony or Internet TV.

Router for Home Networks

Ethernet cable is still the fastest network connection available for now. Up to four PCs can be linked directly to a ZyXEL router via an Ethernet cable, while more computers or devices can be easily connected to the incorporated WLAN, even from other rooms. The integrated firewall can block unauthorized visitors from the Internet services, ensuring your home network is safe and free from unwanted hackers or viruses.

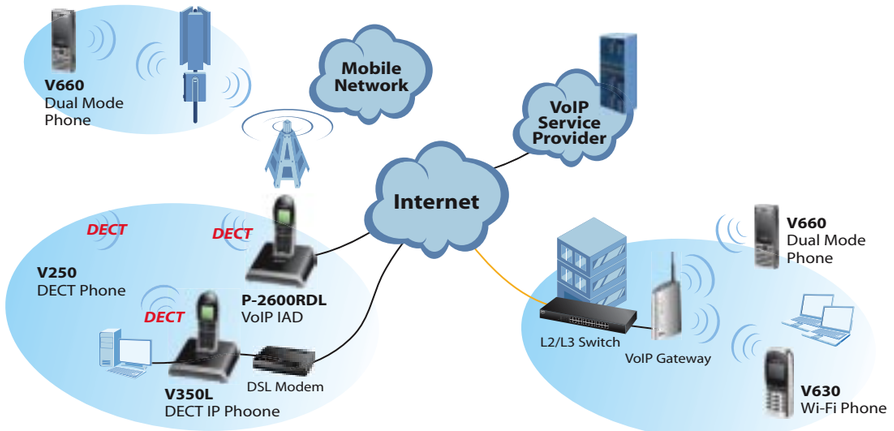
Freedom with VoIP

The VoIP (Voice over IP) technology enables telephone calls to be made over the Internet at a lower cost than standard telephone calls, more available phone numbers, two conversations at the same time, as well as mobility and the home comfort of mobile phones. The integrated DECT and VoIP functions allow users to choose lower VoIP calling charge freely.

Up to six handsets can be register to the P-2600RDL VoIP router so you can enjoy the mobility provided by DECT.

For International calling, the monetary savings to the consumer from switching to VoIP technology can be enormous.

ADSL IAD and IP Phone
Application Scenario



P-2600RDL
ADSL2+ VoIP IAD with DECT

Part Number (STD): 91-006-112001B

- ADSL/ADSL2/ADSL2+ high-speed Internet access
- Support up to 6 DECT GAP-compliant cordless handsets
- Advanced security: SPI Firewall
- Support IP QoS to prioritize voice and data traffics
- TR069/TR104 for easy deployment
- PSTN lifeline support (optional)

V250
DECT Phone

Part Number (STD): 91-006-059001B

- DECT-standard and GAP compliant handset
- 65K color display with graphic menu
- Hands-free speakerphone svailable
- Caller ID support
- Low power consumption design

V660
Dual Mode Phone

Part Number (STD): 91-012-074001B

- GSM/GPRS/Wi-Fi Multi-Mode support
- Windows Mobile 5.0® operating system
- SIP VoIP integration and supports to VCC hand-over between GSM & WLAN
- WPA/WPA2/TLS supports
- IPSec VPN protection

V350L
DECT IP Phone

Part Number (STD): 91-012-060001B

- SIP (RFC 3261)
- Built-in DECT station and supports to up to 6 DECT handsets
- Auto-provisioning and optional TR104 for easy deployment
- Support IP QoS to prioritize voice and data traffics
- PSTN lifeline support

Real-Time-Gaming

XBox and Playstation gamers demand photo-realism and the fastest actions. Although many network devices could be overwhelmed by enormous data flow from the network, thanks to special Multimedia Bandwidth Management (MBM), this is not the case with ZyXEL routers.

Fast Online Gaming

The online gaming experience goes up and down with the speed of player actions, while network devices are pivotal to the fast and precise control commands transmitted over the Internet or LAN. ZyXEL's MBM (Media Bandwidth Management) is designed exactly to prioritize data packets automatically for the best gaming performance.

MBM™ Bandwidth Control

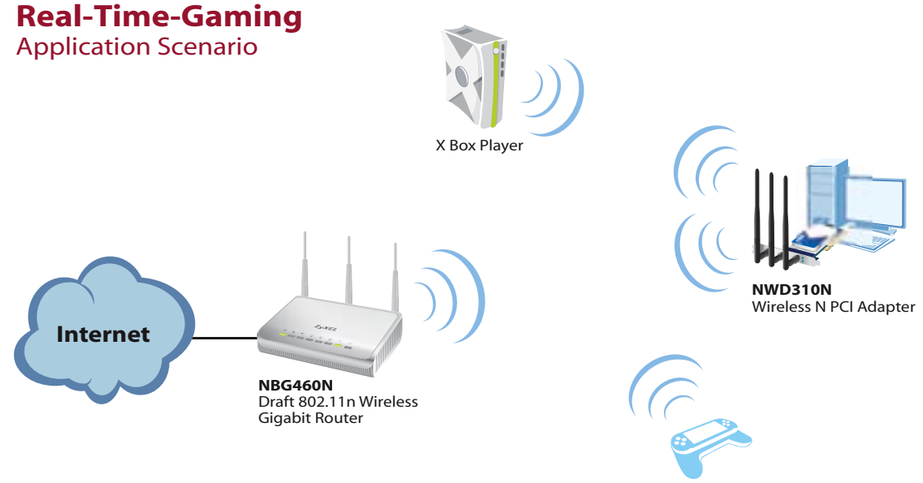
With ZyXEL MBM (Media Bandwidth Management), you decide who gets more bandwidth. With our continuous effort in developing the intelligent bandwidth management feature, MBM2, bandwidth priority is pre-configured by default to serve bandwidth-sensitive applications, like VoIP, Gaming or video streaming.

802.11n Wireless Technology

This is currently known as "802.11n" again it is a wireless standard, which i operates at higher speeds and allow the transmission of files requiring a higher Mbps.

Wireless 802.11n provides a breakthrough solution for larger homes or offices that have a wide area to cover and want to run multimedia and high-bandwidth applications.

Real-Time-Gaming
Application Scenario



NBG460N
Wireless N Gigabit VPN Router
Part Number (STD): 91-003-208001B

- Best-of-breed 802.11n Draft 2.0 wireless technology for extreme 6x performance and 5x coverage
- 2 IPSec VPN tunnel for remote site to central server secure data transfer
- Wireless Scheduler turns on/off wireless radiation to save the power
- Built-in MBM v2 technology for traffic shaping
- Wi-Fi Protected Setup (WPS) for easy wireless security setup

NWD310N
Wireless N PCI Adapter
Part Number (STD): 91-005-224002B

- WPS support (Wi-Fi protected setup)
- Compliant with IEEE 802.11n (draft 2.0) specification, backward compatible with 802.11 b/g
- Advanced wireless security transmission with WEP Encryption and WPA/WPA2 support

External Data Access

Isn't it interesting and useful to access your family videos, photos and other files stored on your home PC through the Internet? With ZyXEL Remote Access, you can now enjoy your digital collections from anywhere quickly and reliably.

No Configuration Needed

ZyXEL Remote Access— it doesn't take a rocket scientist to use ZyXEL's SSL VPN functions. The beauty of the ZyXEL SSL VPN is that the remote computer doesn't need to be configured; a standard Internet browser is the only tool you'll need. Better yet, as many as three connections can be established at the same time.

Help from Afar

The ZyXEL Remote Access is a router with sophisticated SSL (Secure Sockets Layer) VPN features. It functions as a switchboard between home PCs or networks and the broadband Internet connection, and it allows users to access LAN resources with just a browser from the outside world. In addition, If you are working from home and want to have a router that can be supported by your company's support staff this is possible via the remote desktop connections

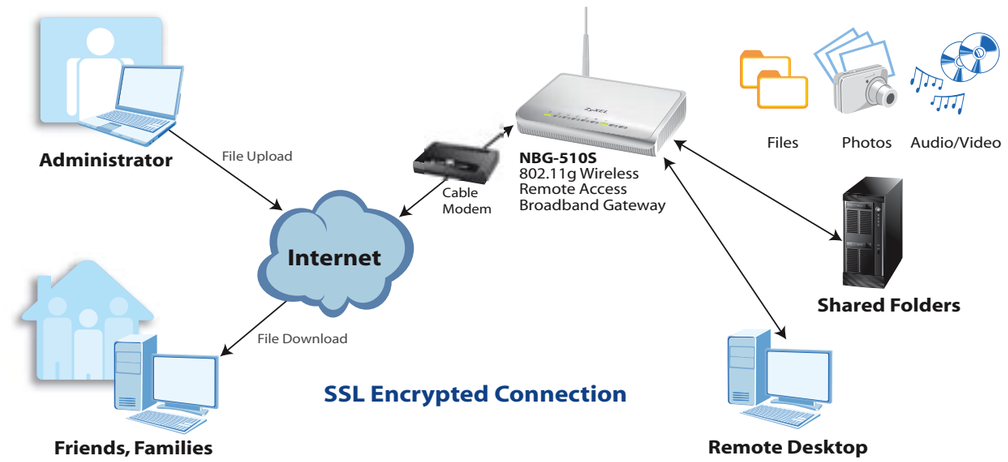
Support and Assistance—PC Remote Control

Remote access applications such as Windows Remote Desktop or Virtual Network Computing (VNC) can be easily established through SSL connections. All it takes are to start a browser, enter the IP address or DynDNS alias, and then log into to the NBG-510S with your account information; the remote desktop connection will be initiated instantly with just a mouse click.

Media Bandwidth Management Technology

The ZyXEL-exclusive Media Bandwidth Management (MBM) technology enables you to enjoy the fluent and excellent performance of bandwidth-sensitive network applications such as VoIP, online gaming, video streaming or P2P sharing. The MBM feature can be seen as an automatic traffic classifier that gives users the power to prioritize tasks or allocate certain bandwidth to designated applications.

External Data Access
Application Scenario



NBG-510S
802.11g Wireless Remote Access Broadband Gateway

Part Number (STD): 91-003-204001B

ZyXEL broadband sharing router NBG-510S provides users with a simple and cost-effective solution for secure remote access connections to share personal content or business data with people anywhere around the world. NBG-510S's advanced SSL (Secure Sockets Layer) security technology is widely used in business fields (such as credit card transaction) to provide you with the enterprise-level protection. Comparing NBG-510S's advanced SSL (Secure Sockets Layer) security technology with traditional VPN (Virtual Private Network), although there is no pre-installed client software, complicated configuration or additional IT security infrastructure required, your contents are still well protected.

- Secured SSL connection for remote access
- Super G Technology Offers the Optimal Wireless Range and Performance of Data Rate Up to 108 Mbps
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support

Reliable Network—Routing

With a router, a number of PCs, printers and other devices can be networked and connected to the Internet; and a WLAN-capable router can further service mobile devices over the wireless network. That is, a WLAN router with integrated Powerline connectivity offers the best flexibility for any kind of configuration.

Shared Internet Access

In modern homes, more and more PCs, multimedia adapters, media center PCs and printers are being networked; among them a router controls and moderates the communications between local clients and the Internet. In addition to the basic features, ZyXEL's firewall routers also provide protection against attacks from the Internet. The integrated switch can connect directly to as many as four devices, and the QoS features can automatically prioritize time-critical data for more performance boost.

Enhanced Security with WEP, WPA/WPA2 and Firewall

64/128-bit WEP and WPA/WPA2 are supported to provide stringent protection for wireless transmissions. In addition, the Wireless Gateway is equipped with firewall features including NAT, Stateful Packet Inspection (SPI) and VPN Pass-through (IPSec, PPTP, L2TP) to prevent attacks from the Internet.

Provide the Best Way to Protect your Network and Children

ZyXEL offer parental controls on our routers. In some cases this is built in whilst in some routers this feature is included with the router software. The parental controls allow you to automatically, as well as manually, select those websites that you want your family to avoid. ZyXEL router's come with security automatically enabled which prevents hackers from accessing your network.

Hottest Product

802.11b/g WiFi CERTIFIED

NBG420N
Wireless N VPN Router

NBG460N
Wireless N Gigabit VPN Router

Part Number (STD):
Not available now (NBG420N)
91-003-208001B (NBG460N)

NBG420N

NBG460N

The next generation of wireless networks are to be called "802.11n". It is planned they will deliver speeds of up to 600 Mbps. Current 802.11n products are available offering advertised speeds of 300 Mbps. It not only provides you with a better Internet experience, but also maintains backward compatibility with existing 802.11b/g networks.

- Cost effective but powerful 802.11n wireless gateway, boost the wireless transmission faster than Ethernet.
- Two IPSec VPN tunnel help telecommuters work at home under extremely secured protection.
- ZyXEL proprietary MBM smartly optimize bandwidth-sensitive network applications such as VoIP, online gaming video streaming or P2P sharing.
- High speed gigabit Ethernet is best for nowadays multimedia transmission in digital home era. (NBG460N only)

Wireless Product Selection Ordering List

	Wireless-A/B/G	Wireless-G High Power	Wireless-G	Wireless-SuperG	Wireless-G MIMO	Wireless-N
Application						
Web Surfing	•	•	•	•	•	•
VoIP	•	•	•	•	•	•
High-Definition Video						•
Online Gaming	•	•	•	•	•	•
Streaming MP3				•	•	•
Avoid Microwave/ Cordless Telephone Interference	•					
Independent Wireless Network	•					
Coverage						
Small Home or Office	•	•	•	•	•	•
Medium/Large Home or Office		•			•	•

Product List

P-660HWP
802.11g HomePlug AV ADSL2+ Gateway
Part Number (STD): 91-004-666001B

- ADSL2+ High-speed Internet Access
- Data Rate of up to 200 Mbps over the Power Line
- HomePlug AV Compliant
- Advanced 128-bit AES Security Protection
- Wi-Fi Multimedia (WMM) Support for Quality of Video & Voice Streaming over Wireless Connection

NBG318S v2
Super G Wireless HomePlug AV Router
Part Number (STD): 91-003-214001B

For early adopters who are eager to enjoy the advantage of somewhat immature technologies, then 802.11n may be a chance worth taking. But for the remaining consumers, integrating Powerline HomePlug into the existing networks may be a far more stable investment at a more reasonable price.

- Data transmission rates of up to 200 Mbps over Powerline
- Configurable Powerline for Internet or Home Network Connections
- Super G Technology Offers the Optimal Wireless Range and Performance of Data Rate Up to 108 Mbps
- HomePlug instant Encrypt button to secure your Powerline network
- Multi-colored LED to indicate data transmission rates over Powerline

NBG-510S
802.11g Wireless Remote Access Broadband Gateway
Part Number (STD): 91-003-204001B

- Secured SSL connection for remote access
- Super G Technology Offers the Optimal Wireless Range and Performance of Data Rate Up to 108 Mbps
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support

NBG460N
Wireless N Gigabit VPN Router
Part Number (STD): 91-003-208001B

- Best-of-breed 802.11n Draft 2.0 wireless technology for extreme 6x performance and 5x coverage
- 2 IPSec VPN tunnel for remote site to central server secure data transfer
- Wireless Scheduler turns on/off wireless radiation to save the power
- Built-in MBM v2 technology for traffic shaping
- Wi-Fi Protected Setup (WPS) for easy wireless security setup

NBG420N
Wireless N VPN Router
Part Number (STD): Not available now

- Best-of-breed 802.11n Draft 2.0 wireless technology for extreme 6x performance and 5x coverage
- 2 IPSec VPN tunnel for remote site to central server secure data transfer
- Secure wireless connection with WPA and WPA2
- Built-in MBM v2 technology for traffic shaping
- Wi-Fi Protected Setup (WPS) for easy wireless security setup

NBG334S
802.11g Wireless Firewall Router
Part Number (STD): 91-003-206001B

- Super G Technology Offers the Optimal Wireless Range and Performance of Data Rate Up to 108 Mbps
- Advanced Media Bandwidth Management (MBM2™) for effective multimedia bandwidth allocation
- Advanced game server search engine
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- 802.11e/Wi-Fi Multimedia (WMM) support

NBG334W
802.11g Wireless Firewall Router
Part Number (STD): 91-003-211001B

- Advanced Media Bandwidth Management (MBM2™) for effective multimedia bandwidth allocation
- Advanced wireless security transmission with WEP Encryption and WPA/WPA2 support
- Stateful Packet Inspection (SPI) Firewall and Denial of Service (DoS)
- 802.11e/Wi-Fi Multimedia (WMM) support

P-320W
802.11g Wireless Firewall Router
Part Number (STD): 91-003-185001B

- Protect networks against unauthorized access with NAT Firewall
- Protect PC and networks from Internet attacks with SPI Firewall
- Up to 54 Mbps data rate
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- 1 detachable antenna
- Friendly, multilingual GUI for easy Web configuration

P-324
Broadband Router
Part Number (STD): 91-003-140001B

- 4 MDI/MDI-X ports
- Protect PC and network from Internet attacks with SPI Firewall
- NAT with DHCP server/client
- Dial backup solution provided
- Friendly, multilingual GUI for easy Web configuration

P-334
Broadband Firewall Router
Part Number (STD): 91-003-149001B

- Protect networks against unauthorized access with NAT Firewall
- Firewall with Stateful Packet Inspection (SPI), Denial of Service (DoS) prevention and IPSec VPN protection
- Additional security of anti-virus and parental control features from Trend Micro TMSS™
- Friendly, multilingual GUI for easy Web configuration

P-334U
802.11a/g Wireless Dual Band Router
Part Number (STD): 91-003-191001B

- 802.11a/g Dual-Band wireless connectivity
- Advanced Media Bandwidth Management (MBM2™) for effective multimedia Bandwidth Allocation
- Advanced game server search engine
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- 802.11e/Wi-Fi Multimedia (WMM) support

P-335U
802.11 a/g Wireless Dual Band VPN Router
Part Number (STD): 91-003-193001B

- 802.11a/g Dual-Band wireless connectivity
- Advanced Media Bandwidth Management (MBM2™) for effective multimedia bandwidth allocation
- Advanced game server search engine
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- 802.11e/Wi-Fi Multimedia (WMM) support

P-335 Plus
Firewall Router with USB Print Server
Part Number (STD): 91-003-200001B

- Built-in USB port for printer sharing
- Firewall with Stateful Packet Inspection (SPI) and Denial of Service (DoS) prevention
- Advanced Media Bandwidth Management (MBM2™) for effective multimedia bandwidth allocation

G-2000 Plus v2
802.11g Wireless 4-port Router
Part Number (STD): 91-005-122001B

- Data rate up to 54 Mbps
- Advanced Security: SPI firewall
- Built-in PEAP Server
- 802.1x and WPA support
- Dynamic WEP key exchange
- 2 detachable dipole antennas

Routing Product Matrix

Model	G-2000 Plus v2	P-324	P-334	P-334U/P-335U	P-335 Plus	P-320W	NBG334W
Product Picture							
WAN/LAN ports	1/4	1/4	1/4	1/4	1/4	1/4	1/4
Antenna	2 x 2 dBi Detachable			1 x 2 dBi Detachable		1 x 2 dBi	1 x 2 dBi Detachable
Powerline							
USB Print Server				P-335U	•		
Dial back-up		•					
IEEE 802.11 a/b/g/n	802.11g			802.11a/g		802.11g	802.11g
WPA/WPA2	•			•		•	•
WMM				•			•
Built-in RADIUS server	•						
OTIST/WPS				OTIST		OTIST	•
IPSec VPN			2	P-335U			
Access Point Mode							
Station Mode							•
SPI/DoS Firewall	•	•	•	•	•	•	•
SSL Remote Access							
QoS	MBM		MBM	MBM v2	MBM v2		MBM v2
Vista Support							•

Model	NBG334S	NBG420N	NBG460N	NBG-510S	NBG318S v2	P-660HWP
Product Picture						
WAN/LAN ports	1/4	1/4	1/4 Gigabit	1/4	1/4	1/4
Antenna	1 x 2 dBi Detachable	2 x 2 dBi Detachable	3 x 2 dBi Detachable	1 x 2 dBi Detachable	1 x 2 dBi Detachable	1 x 3 dBi Detachable
Powerline					HomePlug AV	HomePlug AV
USB Print Server						
Dial back-up						
IEEE 802.11 a/b/g/n	802.11g with Super G	Draft 802.11n 2.0	Draft 802.11n 2.0		802.11g with Super G	802.11g
WPA/WPA2	•	•	•		•	•
WMM	•	•	•		•	•
Built-in RADIUS server						
OTIST/WPS	WPS	WPS	WPS		WPS	OTIST
IPSec VPN		2	2			
Access Point Mode					•	•
Station Mode						
SPI/DoS Firewall	•	•	•	•	•	•
SSL Remote Access				•		
QoS	MBM v2	MBM v2	MBM v2		MBM v2	MBM
Vista Support	•		•		•	

Data over the Powerline—Powerline

The latest HomePlug AV Powerline technology can boost data transfer rates of home networks significantly. With at least two to a maximum of 15 Powerline adapters working together, a gross data throughput of up to 200 Mbps can be achieved using the existing electrical power network.

No Ethernet Connection?

New digital entertainment products such as media adapters, media centers and game consoles are usually set up in the living room; however Ethernet connections are, in many cases, missing from the places where network connectivity is needed for example in the study or hallway

Power Outlets for Ethernet Connection

Fortunately, the problem can be easily solved by Powerline adapters, since the technology converts any power outlet into an Ethernet port. The advantage of Powerline networks over WLAN is that the transmission won't be affected by the thickness of walls or window glass in any way and it doesn't leave the unsightly mess of Ethernet cables running around your home or the need to drill through walls.

Extend Available Electricity Bandwidth

The electricity you use in your home is supplied at 50 Hz and the wires used to carry this electricity are able to carry more than just electricity without affecting your current electrical requirements. The wires can be tuned to use the unused bandwidth/capacity in order to transmit your home network connection using a Powerline HomePlug Adapter. If your wireless network does not extend around your house, or you have dead spots, this will use your electrical mains to reach those areas.

Protects Network with Advanced Security

Secure by 128 bits AES encryption over Powerline and WPA/WPA2 over wireless, ZyXEL Powerline HomePlug Series is the best home connectivity solution at home to bring wireless Internet roaming to any corners in the remote space upstairs, downstairs, garage, even backyard and basement.

Comprehensive Networking Solution Types

ZyXEL's HomePlug series provides the most comprehensive solution types to satisfy your needs. The Turbo Series is a value product with 85 Mbps** data rate and wireless extension, while the AV Series reaches 200 Mbps** effective data rate and better QoS support for entertainment devices.

The portable wall-mount series is suitable for users who change working locations. Alternatively, the desktop series can reserve more available outlets for other electrical appliances.

*** Data in theory. Actual throughput and transmission range depend on interference in your household power circuit and the quality of the electrical installation.*

Product List

PLA491
Powerline Ethernet Adapter with Powerstrip

Part Number (STD): Not available now

- Data transmission rates of up to 200 Mbps over Powerline
- 4-port switch to expand home networking
- HomePlug AV compliant
- HomePlug Instant Encryption Button
- Four outlets with EMI filter to centralize other electrical appliances

PLA470 v2
Powerline Ethernet 4-port Switch

Part Number (STD): 91-010-182001B

- Data transmission rates of up to 200 Mbps over Powerline
- 4-port switch to expand home networking
- HomePlug AV compliant
- HomePlug Instant Encryption Button
- Multi-colored LED to indicate data transmission rates over Powerline

PLA455
Powerline Wireless AP

Part Number (STD): Not available now

- Data transmission rates of up to 200 Mbps over Powerline
- One Gigabit Ethernet Port
- 802.11n Wireless connectivity
- HomePlug AV compliant
- HomePlug Instant Encryption Button
- Multi-colored LED to indicate data transmission rates over Powerline

PLA450 v2
Powerline Wireless Ethernet Bridge

Part Number (STD): 91-005-229001B

- Data transmission rates of up to 200 Mbps over Powerline
- 802.11g Wireless connectivity
- HomePlug AV compliant
- HomePlug Instant Encryption Button
- Multi-colored LED to indicate data transmission rates over Powerline

PLA402 v2
Powerline Hybrid Adapter

Part Number (STD): 91-014-040001B

- Simultaneous Ethernet, Coaxial and Power connections for applications
- Data transmission rates of up to 200 Mbps over Powerline
- Stylish Desktop Design with Universal Power Cord
- HomePlug AV Compliant
- HomePlug Instant Encryption Button
- Multi-colored LED to indicate data transmission rates over Powerline

PLA401 v2
Powerline Ethernet Adapter

Part Number (STD): 91-014-031001B

- Data transmission rates of up to 200 Mbps over Powerline
- Simple Direct Plug Design
- HomePlug AV compliant
- HomePlug Instant Encryption Button
- Multi-colored LED to indicate data transmission rates over Powerline

PLA-400 v2
Powerline Ethernet Adapter

Part Number (STD): 91-014-024001B

- Data transmission rates of up to 200 Mbps over Powerline
- Stylish Desktop Design with Universal Power Cord
- HomePlug AV Certified
- HomePlug Instant Encryption Button
- Multi-colored LED to indicate data transmission rates over Powerline

PL-100
Powerline Ethernet Adapter

Part Number (STD): 91-014-004001B

- Data transmission rates of up to 85 Mbps over Powerline
- 56-bit Data Encryption Security (DES) protects Powerline transmission
- HomePlug 1.0 compatible

Powerline Family Product Matrix

Model	DMA-1100P**	P-660HWP*	NBG318S v2*	PLA491	PLA470 v2	PLA455
Product Picture						
Product Name	HomePlug AV Digital Media Adapter	802.11g HomePlug AV ADSL2+ Gateway	Super G Wireless HomePlug AV Router	Powerline Ethernet Adapter with Powerstrip	Powerline Ethernet 4-port Switch	Powerline Wireless AP
PHY Rate	200 Mbps	200 Mbps	200 Mbps	200 Mbps	200 Mbps	200 Mbps
Plug Type	Power Inlet	Power Inlet	Power Inlet	Power Inlet	Power Inlet	Powerline Inlet
Wireless Network		802.11g	802.11g (Super G)			802.11g (Super G)
Ethernet Port Number	1	4	4	4	4	1
Coaxial Port Number						
Homeplug Standard	HomePlug AV	HomePlug AV	HomePlug AV	HomePlug AV	HomePlug AV	Homeplug AV
Security Encryption	128-bit AES	128-bit AES	128-bit AES	128-bit AES	128-bit AES	128-bit AES

**: You find detailed information to P-660HWP/NBG318S v2 on the page 17.*

***: You find detailed information to DMA-1100P on the page 31.*

Model	PLA450 v2	PLA402 v2	PLA401 v2	PLA-400 v2	PL-100
Product Picture					
Product Name	Powerline Wireless AP	Powerline Hybrid Adapter	Powerline Ethernet Adapter	Powerline Ethernet Adapter	Powerlline Ethernet Adapter
PHY Rate	200 Mbps	200 Mbps	200 Mbps	200 Mbps	85 Mbps
Plug Type	Power Inlet	Power Inlet	Direct Plug	Power Inlet	Power Inlet
Wireless Network	802.11g (Super G)				
Ethernet Port Number	1	1	1	1	1
Coaxial Port Number		1			
Homeplug Standard	HomePlug AV	HomePlug AV	HomePlug AV	HomePlug AV	HomePlug Turbo
Security Encryption	128-bit AES	128-bit AES	128-bit AES	128-bit AES	56-bit DES

Difference between HomePlug 1.0 and HomePlug AV

HomePlug 1.0

HomePlug 1.0, is the first generation that the HomePlug Powerline Alliance , which is Thirteen industry-leading companies formed the HomePlug Powerline Alliance in March of 2000, approved and this provides performance comparable to the original 802.11b Wi-Fi.

This is suitable for extending your network, for creating a home network to share media files.

HomePlug AV

HomePlug AV, the second generation, is designed for delivering High-Definition television and video over existing electrical wiring. High-definition video is the most challenging application for networking.

To transmit high definition requires data rates upwards of 20 Mbps per channel, sufficient range to cover the entire house. You also will require the Quality of Service (QoS) to ensure that the video gets from one place to another without interference from other applications so you don't have time delays from what you want to watch and what you see on your TV.

Wireless LAN solutions today are capable of very high data rates, so multimedia files such as video, music and data can be transmitted via the wireless LAN while preserving their quality.

Extended Wireless Range/Coverage

The ZyXEL high-power adapter series could reach double range, over standard 802.11g clients, while together with a high-power router/AP. If what you look for is not only whole-home coverage but also multimedia applications, such as high-definition video streaming, heavy Internet interactive gaming, then 802.11n adapters are the choice for you. ZyXEL 802.11n technology can eliminate dead zones and extend coverage for up to 4 times, while retaining the backward-compatibility with all 802.11b/g devices.

Business-Grade Wireless Security and Privacy

The new wireless security measures employed by ZyXEL client adapters allow only authorized users to access the network in order to protect data from being tapped during wireless transmissions. In addition to the basic WEP (Wireless Encryption Protocol) encryption, ZyXEL client adapters are equipped with advanced security measures such as 802.1x authentication and Wi-Fi Protected Access (WPA /WPA2) to enhance network protection and user privacy. WPA uses partial 802.11i, while WPA2 uses full 802.11i which is the most secure mechanism available today

Enhanced Multimedia Supports

The ZyXEL client adapters with multimedia support can improve Internet experience from plain data transmission to rich multimedia enjoyment smoothly without compromising quality. The 802.11e WMM (Wi-Fi Multimedia) technology employed by the ZyXEL client adapter enables multimedia applications, such as Internet phone (VoIP), video (video-on-demand) and audio (Internet radio) to secure the sufficient bandwidth shared

Wireless AP

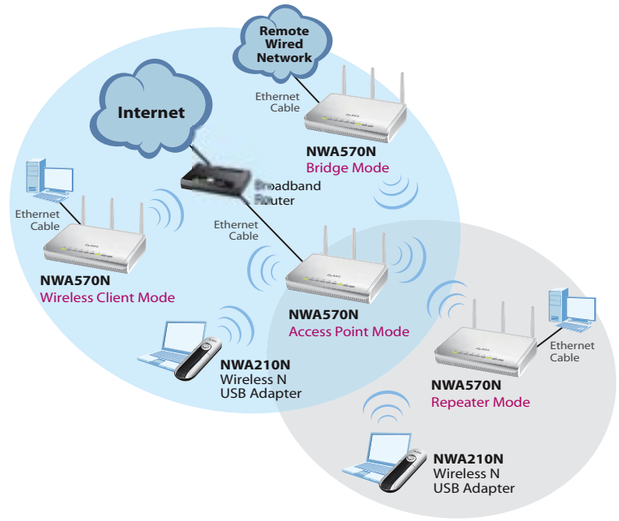
With Wi-Fi standard compliance and powerful built-in security, ZyXEL's wireless AP Series allows users to enjoy the freedom of wireless mobility, high speed internet access and the secure networking at home and offices

AP + Repeater: Extend coverage of the existing or newly deployed wireless access points.

Bridge: Pure Bridge mode. Reserve bandwidth for bridging and not to be disturbed by client access.

Client: Enable latest wireless technology access for game station, computer, or other Ethernet devices.

Wireless AP Application Scenario



Product List

NWA570N
Wireless N Access Point/Bridge

Part Number (STD): 91-005-222002B

- Delivers Data Rates of up to 300 Mbps in 802.11n Draft Mode
- Four Operation Modes: AP, Repeater, Bridge and Wireless Client
- MAC Address Filtering to Limit Access to the Wireless Network
- Supports Wi-Fi Protected Access (WPA/WPA2) and 64/128/152-bit WEP Encryption

G-570S v2
802.11g Wireless Access Point

Part Number (STD): 91-005-198001B

- Wireless Super G Technology doubles standard 802.11g data rate up to 108 Mbps.
- 4-in-1 Design Enables Full Flexibility of Deployment
- Wi-Fi certificate WPA/WPA2 ensures wireless transmission Security and interoperability
- One-touch intelligent security technology (OTIST)

G-570U
Wireless N Access Point/Bridge

Part Number (STD): 91-005-142001B

- 802.11a/g dual-band wireless connectivity
- Four operating modes: AP, Repeater, Bridge and Wireless Client
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Creates a secure wireless connection with One-Touch Intelligent Security Technology (OTIST)

Wireless Access Point Product Matrix

Model	NWA570N	G-570U	G-570S v2
Product Picture			
Product Name	4-in-one Wireless AP	4-in-one Wireless AP	4-in-one Wireless AP
Operation Mode	Bridge Mode Repeater Mode Access Point Mode Wireless Client Mode	Bridge Mode Repeater Mode Access Point Mode Wireless Client Mode	Bridge Mode Repeater Mode Access Point Mode Wireless Client Mode
Standard	802.11n draft 2.0	802.11a/g	802.11g (Super G)
Data Rate	300 M	54 M	108 M
Number of 10/100M LAN/ Switch	4	1	1
802.11b/g	•	•	•
802.11a		•	
Number of Antenna	3	1	1
Detachable Antenna	•	•	•
Antenna Gain	2 dBi	2 dBi	2 dBi
Maximum Throughput	300 Mbps	54 Mbps	108 Mbps
Speed Enhance Mode			Super G
Output Power Management	•	•	•

Wireless Client

Most Comprehensive Offerings at User's Choice

ZyXEL's Wireless Client adapters range from 54 Mbps 802.11g, 108 Mbps SuperG, 802.11a/b/g dual-band, to the most advanced 802.11n whose transmission rate of up to wired speed. Users can pick and choose the most appropriate adapter based on their application needs.

Product List

NWD-370N
Draft 802.11n Wireless PCI Adapter
Part Number (STD): 91-005-160001B

- Interoperates at up to 300 Mbps with other Draft 802.11n products
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Complies with 802.11n, backward compatible with 802.11b/g

NWD310N
Wireless N PCI Adapter
Part Number (STD): 91-005-224002B

- Blazing High-Speed Data Rates of up to 300 Mbps
- WPS support (Wi-Fi protected setup)
- Compliant with IEEE 802.11n (draft 2.0) specification, backward compatible with 802.11b/g

NWD210N
Wireless N USB Adapter
Part Number (STD): 91-005-223002B

- Blazing High-Speed Data Rates of up to 300 Mbps
- Supports WPS (Wi-Fi Protected Setup)
- Compliant with IEEE 802.11n (draft 2.0) specification
- Multi-path (2Tx2R) design and 2 built-in PCB antennas guarantee best transmitting/ receiving quality

NWD-170N
Draft 802.11n Wireless Cardbus Card
Part Number (STD): 91-005-159001B

- Interoperates at up to 300 Mbps with other Draft 802.11n products
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Complies with 802.11n, backward compatible with 802.11b/g

AG-320
802.11a/g Wireless PCI Adapter
Part Number (STD): 91-005-135001B

- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Wi-Fi Multimedia (WMM) support for video and voice streaming quality over wireless connections
- Creates a secure wireless connection with OTIST
- Window XP 64-Bit Edition support
- Software AP support

AG-225H v2
802.11a/g Wi-Fi Finder & USB Adapter
Part Number (STD): 91-005-138001B

- Dual-band A/G wireless access to expend 2.4 GHz and 5 GHz frequency range
- Software Access Point (AP) mode support for sharing Internet connections
- Hot spot-Finder: LCD screen for displaying 802.11a/b/g/draft n wireless networks information, including SSID, channel and security; LCD backlight support

AG-220
802.11a/g Wireless USB Adapter
Part Number (STD): 91-005-139001B

- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Wi-Fi Multimedia (WMM) support for video and voice streaming quality over wireless connection
- Creates a secure wireless connection with OTIST
- Window XP 64-Bit Edition support
- Software AP support

AG-120
802.11a/g Wireless CardBus Card
Part Number (STD): 91-005-127001B

- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Wi-Fi Multimedia (WMM) support for video and voice streaming quality over wireless connection
- Creates a secure wireless connection with One-Touch Intelligent Security Technology (OTIST)
- Window XP 64-Bit Edition support
- Software AP support

G-470
802.11g Wireless Ethernet Adapter
Part Number (STD): 91-005-141001B

- 802.11b/g high-power wireless connectivity
- External signal strength indicator
- Reverse SMA connector with detachable antenna
- Advanced wireless security transmission with WPA/WPA2 and 802.1x support
- Power over Ethernet support

G-320H **Not available in Europe*
802.11g Wireless High Power PCI Adapter
Part Number (STD): 91-005-155002B

- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Wi-Fi Multimedia (WMM) support for video and voice streaming quality over wireless connection
- Creates a secure wireless connection with One-Touch Intelligent Security Technology (OTIST)
- Window XP 64-Bit Edition support
- Software AP support

G-302 v3
802.11g Wireless PCI Adapter
Part Number (STD): 91-005-131001B

- 802.11g PCI wireless adapter with WHQL certification
- Up to 54 Mbps data transfer rate in 802.11g operation mode
- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support

G-220 v2
802.11g Wireless USB 2.0 Adapter
Part Number (STD): 91-005-158001B

- 802.11g USB wireless adapter with Wi-Fi and WHQL certification
- Create a secure wireless connection with One-Touch Intelligent Security Technology (OTIST)
- Functions as client or access point at users' discretion
- PSP X-Link support

G-210H
802.11g Wireless High Power USB Adapter
Part Number (STD): 91-005-182001B

- Advanced wireless security transmission with WEP encryption and WPA/WPA2 support
- Wi-Fi Multimedia (WMM) support for video and voice streaming quality over wireless connection
- Rotating USB connector
- Built-in LED signal strength indicator

G-202
802.11g Wireless USB 2.0 Adapter
Part Number (STD): 91-005-136001B

- Wi-Fi Multimedia (WMM) support for video and voice streaming quality over wireless connection
- Creates a secure wireless connection with One-Touch Intelligent Security Technology (OTIST)
- Software AP support
- PSP X-Link support

Wireless Client Product Matrix

Model	NWD-370N	NWD310N	NWD210N	NWD170N	AG-320	AG-225H v2	AG-220
Product Picture							
Description	Draft N PCI Adapter	Wireless N PCI Adapter	Wireless N USB 2.0 Adapter	Draft N CardBus Card	PCI Adapter	Wi-Fi Finder & USB 2.0 Adapter	USB 2.0 Adapter
Standard	802.11b/g/ draft n	802.11b/g/ draft n 2.0	802.11b/g/ draft n 2.0	802.11b/g/ draft n	802.11a/b/g	802.11a/b/g	802.11a/b/g
Wi-Fi Certified		• (b/g/n)	• (b/g/n)		• (a/b/g)	• (a/b/g)	• (a/b/g)
OS Support	Windows 2000/ XP/XP64/Vista	Windows 2000/ XP/XP64/Vista Linux	Windows 2000/ XP/XP64/Vista Mac OS	Windows 2000/ XP/XP64/Vista	Windows 2000/ XP/XP64/Vista	Windows 2000/ XP/XP64/Vista Mac OS	Windows 2000/ XP/XP64/Vista
WPS		•	•				
WMM		•	•		•	•	•
Soft AP		•	•		•	•	•
Security	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2
WiFi-Finder						•	
Dual-band Support					•	•	•
MIMO Technology	•	•	•				

Model	AG-120	G-470	G-320H	G-302 v3	G-220 v2	G-210H	G-202
Product Picture							
Description	CardBus Card	Wireless Ethernet Adapter	High Power PCI Adapter	PCI Adapter	USB 2.0 Adapter	USB 2.0 Adapter	USB 2.0 Adapter
Standard	802.11a/b/g	802.11n Draft 2.0	802.11b/g	802.11b/g	802.11b/g	802.11b/g	802.11b/g
Wi-Fi Certified	• (a/b/g)	• (b/g)	• (b/g)	• (b/g)	• (b/g)	• (b/g)	• (b/g)
OS Support	Windows 2000/ XP/XP64/Vista	Windows 98 SE/ME/2000/ XP/XP64/Vista, Linux, Mac OS	Windows 2000/ XP/XP64/Vista	Windows 2000/ XP/XP64/Vista	Windows 2000/ XP/XP64/Vista	Windows 2000/ XP/XP64/Vista, Mac OS	Windows 2000/ XP/XP64/Vista
WPS					•		•
WMM	•		•		•	•	•
Soft AP	•		•		•	•	•
Security	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2
Dual-band Support	•						
High Power			•			•	

Media Streaming—Digital Media Adapter

Digital Media Adapter is a method of providing multimedia files such as audio, video and data around the home.

What this means for you is that the movie or music you watch or listen to will not suffer any pausing (lag) or stoppages (buffering delays) caused by poor streaming, normally associated with wireless streamers.

Stunning Output Quality with Direct Digital-to-Digital Transfer

Afraid of getting bad output quality through transmission? Not so with ZyXEL Digital Media Adapter Series support of HDMI and SPDIF direct digital-to-digital output. High-Definition Multi-media Interface (HDMI) allows a pure digital connection for both video and audio signals using a single cable. Sony/Philips Digital Interface Format (SPDIF) transmits digital audio from the Digital Media Adapter Series to your stereo system and delivers high quality surround sound playback. Thus the Digital Media Adapter Series give you stunning viewing and listening quality unmatched by others.

Hassle-Free Digital Home Setup

ZyXEL Digital Media Adapter Series follow DLNA guidelines and access PC's content with the control by Microsoft® Windows Media Connect™ to get a hassle-free setup process. Digital Living Network Alliance (DLNA) allows you to easily set up a home entertainment system with devices made from different manufacturers. You just need to share the folders of digital content and activate Digital Media Adapter Series on your PC you can enjoy your digital content right away. Setting up your home entertainment system has never been easier.

Versatile Digital Content Format Support

ZyXEL Digital Media Adapter Series supports a wide range of music, photo and video formats from your computer. You can enjoy or access digital contents right away in your living room without having to convert formats. Video formats include WMV9 or MPEG-4. You can enjoy films up to 1080i on a high-definition TV, lie on the couch and listen to the music from a Hi-Fi stereo playing MP3, WAV or WMA9 formats or simply play a slide show of your pictures in JPEG, BMP or GIF formats.

Product List

DMA-1100P
HomePlug AV Digital Media Adapter
Part Number (STD): 91-014-026001B

- HomePlug built-in
- High-definition audio and video streaming support
- Listen to MP3 and digital music collection through the stereo system
- Browse digital pictures in JPEG, GIF, TIF, BMP and PNG formats on TV
- Select graphical on-screen menu with the IR remote control
- Built-in USB 2.0 for portable memory devices

DMA-1000/W
Digital Media Adapter
Part Number (STD):
91-014-005001B (DMA-1000)
91-014-006001B (DMA-1000W)

- 802.11g wireless connectivity (DMA-1000W only)
- High-definition audio and video streaming support
- Listen to MP3 and digital music collection through the stereo system
- Browse digital pictures in JPEG, GIF, TIF, BMP and PNG formats on TV
- Select graphical on-screen menu with the IR remote control
- Built-in USB 2.0 for portable memory devices

Digital Media Adapter Product Matrix

Model	DMA-1000	DMA-1000W	DMA-1100P
Product Picture			
Codec Specification			
Video	MPEG-PS; MPEG2-TS/TTS; WMA; MPEG4 (avi; mp4)	MPEG-PS; MPEG2-TS/TTS; WMA; MPEG4 (avi; mp4)	MPEG-PS; MPEG2-TS/TTS; WMA; MPEG4 (avi; mp4)
DRM			WMDRM10-nd
Audio	MP3; WAV; WMA; OGG; M4A	MP3; WAV; WMA; OGG; M4A	MP3; WAV; WMA; OGG; M4A
Photo	JPEG; BMP; PNG; TIFF; GIF	JPEG; BMP; PNG; TIFF; GIF	JPEG; BMP; PNG; TIFF; GIF
A/V Connectors			
HDMI	HDMI 1.1	HDMI 1.1	HDMI 1.1
S-Video	•	•	
Composite Video			•
SPDIF (Coaxial)	•	•	•
RCA Audio (L/R)	•	•	•
SCART	Bundle Cable	Bundle Cable	Bundle Cable
Networking			
Port	10/100 Mbps x1	10/100 Mbps x1	10/100 Mbps x1
Other Networking		IEEE 802.11b/g	HomePlug AV
Other			
USB Port	USB 2.0 x1	USB 2.0 x1	USB 2.0 x1
DLNA Certified	•	Certifying	•
Dolby Certified	•	•	•

Storage en Masse—Network Storage Appliance

Ditch the DVD's, CD's and photo albums —you only need one small box like ZyXEL's Multimedia Network Storage Server which has an easy access menu and library to store your family's entire multimedia content.

Need More Storage?

If the free hard disk space is getting smaller and smaller, you may always install a larger disk into the PC, or have an external disk attached; however, the most convenient and flexible way is having an external network storage appliance (NSA) connected to the network.

Safety Assured

ZyXEL NSA can protect data from accidental loss.With the built-in RAID1 (Redundant Array of Independent Disks) mirror mode protection, ZyXEL Home NSA prevents priceless home and personal collections from any single disk failure. The fully licensed MEMEO™ backup software will perform instant backup to the ZyXEL Home NSA, ensuring all your treasured multimedia copy is protected

The intelligent "auto-copy" button helps users to offload data from external storages, flash disks or card readers to the ZyXEL NSA immediately through the USB 2.0 interface, and ZyXEL NSA will automatically create a folder to accommodate all the transferred data.

Plug-and-Play Anywhere with DLNA

Is the data you're looking for sitting on another PC all the time? The built-in DLNA-certified1 ZyXEL media server can stream and playback digital contents directly to any DLNA-capable home devices such as digital TV, laptop or desktop computers (DLNA version 1.5, to be released in the near future, also works with mobile devices like mobile phone and PDA). In other words, users won't be restricted to a single manufacturer; so that you can freely compare prices and features, buy the products that suit you best, and then build up your digital home in a convenient and cost-effective way.

P2P Download with PC Off

ZyXEL NSA enables P2P (Bit Torrent) to automatically download files without switching your PC on. You can download files 24 hours a day, 7 days a week with less power expense and interruption with PC off. Alternatively, you can use PC and broadband connection at the same time for handling other important tasks.

1: DLNA (Digital Living Networking Alliance) is a universal standard to enable digital devices from different manufacturers to communicate and work with each other.

Product List

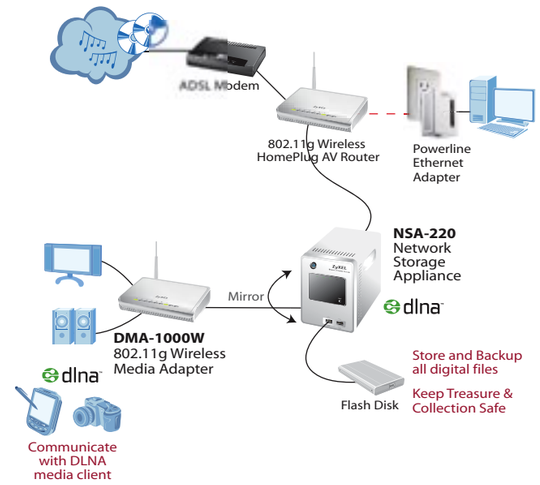
NSA-220
Network Storage Appliance
Part Number (STD): 91-016-006001B

- Dual-Bay Design with Maximum Capacity Up to 2 Terabytes
- PC-less BT/HTTP/FTP Download Service
- Pod-cast/Broad-catching Support
- DLNA-Certified Server
- Easy-to-Use Memeo™ Instant Backup Software

NSA-210
Network Storage Appliance
Part Number (STD): Not available now

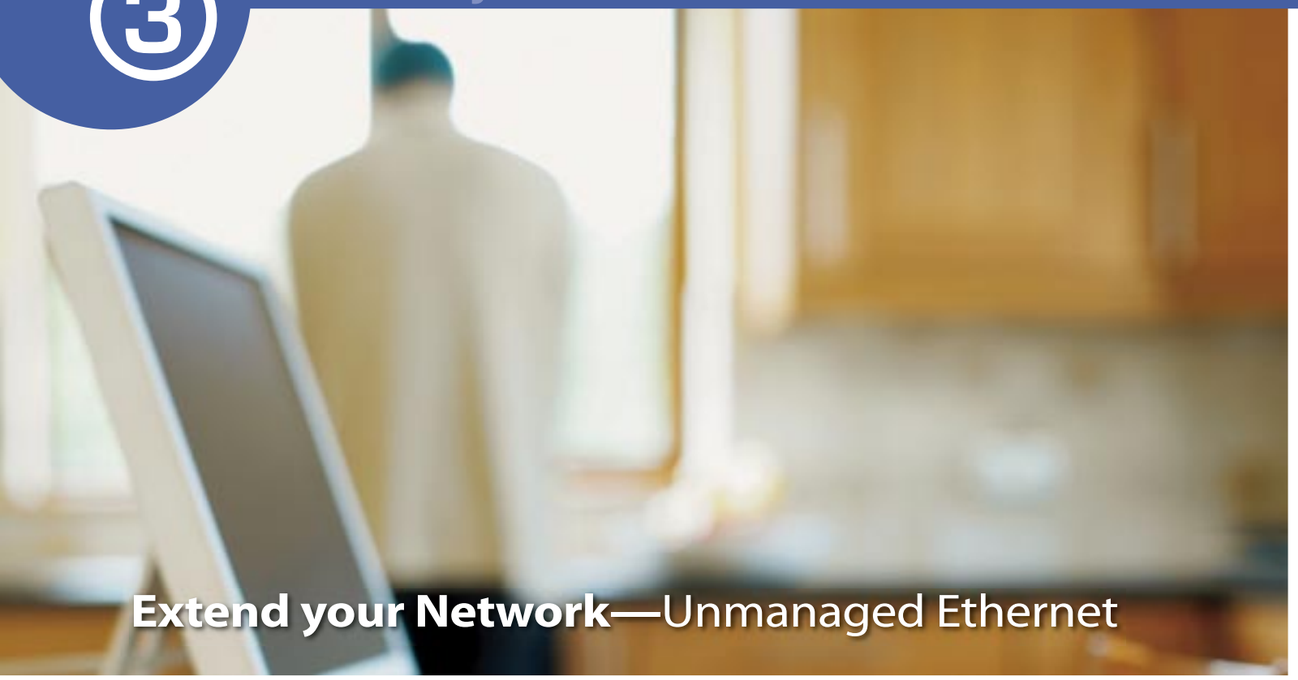
- One-Bay Design with Maximum Capacity Up to 1 Terabytes
- PC-less BT/HTTP/FTP Download Service
- Pod-cast/Broad-catching Support
- Easy-to-Use Memeo™ Instant Backup Software

Network Storage Appliance
Application Scenario



Storage Appliance Product Matrix

Model		NSA-220	NSA-210
Product Picture			
Description		2-bay Home NAS Server	1-bay Home NAS Server
Hardware Specs	Ethernet Networking	1 GE	1 GE
	USB 2.0 Port	2	2
	HDD Capacity	2 x 3.5" SATA I/II HDD	1 x 3.5" SATA I/II HDD
	eSATA		•
	Power Management	System Fan Spin Down and HDD Spin Diwn	System Fan Spin Down and HDD Spin Diwn
Disk Management	Standard (JBOD) Mode	•	
	Spanning Mode	•	
	Mirror Mode	•	
Backup Software		Memeo AutoBack	Memeo AutoBack
Network Applications	File Sharing over Network	•	•
	Media Server	•	•
	Download Service (BT/HTTP/FTP)	•	•
	Web Server	•	•
	Built-in FTP Server	•	•
	USB Print Server	•	•
	Jumbo Frame	•	•
Others	Multi-language	English, Traditional Chinese, Italian, French, German, Japanese	English, Traditional Chinese, Italian, French, German, Japanese
	Performance (Nerformance 8 clients SINGLE)	48	<48



Extend your Network—Unmanaged Ethernet

ZyXEL unmanaged switch product line is designed for powering connectivity. With "Plug-and-play" configuration and flexible design, small businesses or home offices can easily find a proper solution to set up network as they wish.

Desktop Unmanaged Fast Ethernet

ES-124P
24-port Desktop Ethernet Switch with Internal Power
Part Number (STD): 91-010-086001B

Total ports available: 24
- 24-port 10/100Base-TX
- Non-blocking backplane 4.8 Gbps
- Max power consumption: 7.26 watt
- Dimensions: 267 (W) x 152.5 (D) x 42 (H) mm
- 19" rackmount brackets included
- Internal Power Supply

ES-116P
16-Port Desktop Ethernet Switch with Internal Power
Part Number (STD): 91-010-085001B

Total ports available: 16
- 16-port 10/100Base-TX
- Non-blocking backplane 3.2 Gbps
- Max power consumption: 6.44 watt
- Dimensions: 215 (W) x 133 (D) x 42 (H) mm
- 19" rackmount brackets included
- Internal Power Supply

ES-108P
8-port Desktop Fast Ethernet Switch with Internal Power
Part Number (STD): 91-010-076004B

Total ports available: 8
- 8-port 10/100Base-TX
- Non-blocking backplane 1.6 Gbps
- Max power consumption: 3.44 watt
- Dimensions: 194 (W) x 85 (D) x 25 (H) mm
- Internal Power Supply

Desktop Unmanaged Gigabit Ethernet

ES-108A
8-port Desktop Fast Ethernet Switch
Part Number (STD): 91-010-084001B

Total ports available: 8
- 8-port 10/100Base-TX
- 3 hardware configured QoS Priority Ports
- Non-blocking backplane 1.6 Gbps
- Max power consumption: 2.75 watt
- Dimensions: 154.5 (W) x 85 (D) x 26 (H) mm
- External Power Supply

ES-105A
5-port Desktop Fast Ethernet Switch
Part Number (STD): 91-010-083001B

Total ports available: 5
- 5-port 10/100Base-TX
- 2 hardware configured QoS Priority Ports
- Non-blocking backplane 1.0 Gbps
- Max power consumption: 2.15 watt
- Dimensions: 121 (W) x 75 (D) x 26 (H) mm
- External Power Supply

GS-108B
8-port Desktop Gigabit Ethernet Switch
Part Number (STD): 91-010-045011B

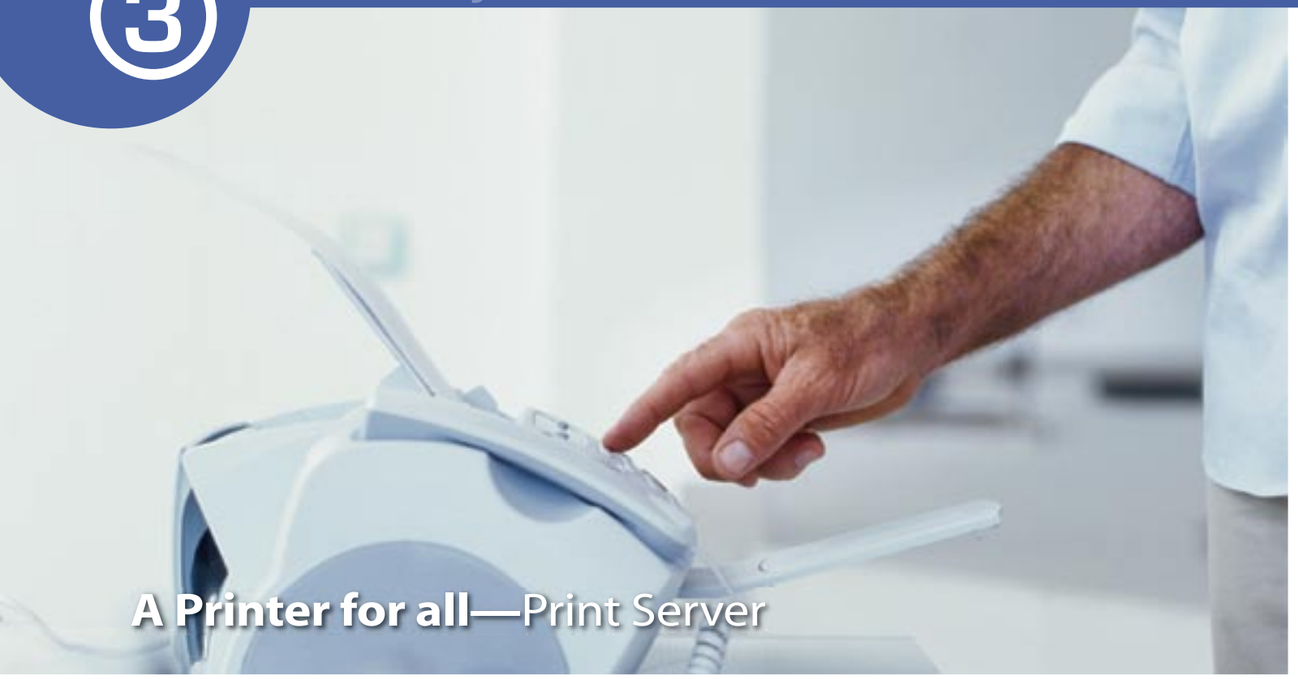
Total ports available: 8, all gigabit
- 8-port 100/1000Base-T
- Non-blocking backplane 16 Gbps
- Max power consumption: 13.2 watt
- Dimensions: 165 (W) x100 (D) x 32.5 (H) mm
- External Power Supply

GS-105B
5-port Desktop Gigabit Ethernet Switch
Part Number (STD): 91-010-044007B

Total ports available: 5, all Gigabit
- 5-port 100/1000Base-T
- Non-blocking backplane 10 Gbps
- Max power consumption: 7.5 watt
- Dimensions: 165 (W) x100 (D) x 32.5 (H) mm
- External Power Supply

Desktop Unmanaged Switch Product Matrix

Model	ES-124P	ES-116P	ES-108P	ES-108A	ES-105A	GS-108B	GS-105B
General Information							
10/100Base-T, Fixed	24	16	8	8	5		
10/100/1000Base-T, Fixed						8	5
Auto MDI/MDI-X	•	•	•	•	•	•	•
Performance							
Switching Fabric (Gbps)	4.8	3.2	1.6	1.6	1	16	10
Forwarding Rate (Mbps)	3.6	2.4	1.2	1.2	1	11.9	7.4
Packet Buffer	1.25M bit	1.25 M bit	96 kb	96 kb	64 kb	256 kb	256 kb
MAC Address Table	8 k	8 k	1 k	1 k	1 k	8 k	8 k
Traffic Control							
Broadcast Storm Control	•	•	•	•	•		
VLAN Packet Pass Through	•	•	•	•	•	•	•
Others							
Rack Mountable	•	•					
Internal Switching Power	•	•	•				



A Printer for all—Print Server

Owners of multi-function printers may want to use the print or scan feature from different PCs. This normally requires a "central" PC that connects directly to the printer and accepts requests from others, but a specialized print server can also play the same role without a dedicated computer.

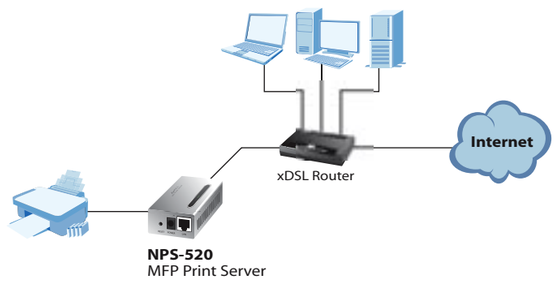
Central Printer

The small-footprint ZyXEL NPS-520 print server is a bridge between a USB printer and a LAN to transform the printer into a central network service. Be it an office notebook or a private PC, everyone can operate the printer directly. With ZyXEL NPS-520 deployed, a functionally advanced or higher priced printer may become more worthwhile since it would be taken advantage of by several workstations.

Scanner Functions

In Windows XP, scanned document images can be sent to the PC via Microsoft utility, and the printer status information can be displayed on the PC as well. The NPS-520 allows bi-directional communications, while other print servers offer only one-direction transmission to the printer.

Application Diagram



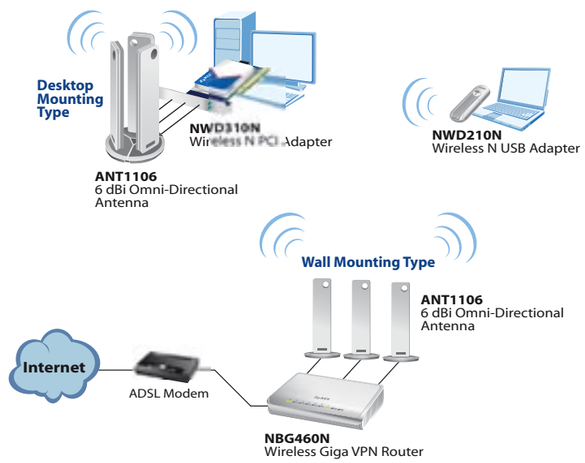
NPS-520
MFP Print Server
Part Number (STD): 91-014-020001B

- Share a printer without sharing your PC to Multiple Users
- Compatible with Multi-Function Printers
- Auto-connected Print Job at Any Time
- Real time Ink and Paper Status Monitoring
- Easy Installation with Multilingual Support

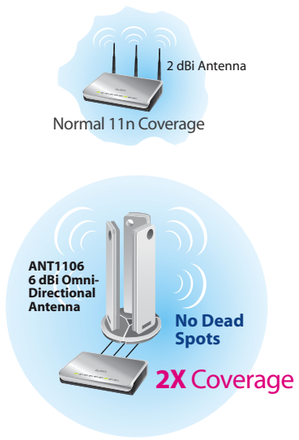
Antenna

Either in office or family, ZyXEL offers high gain antenna solution for indoor environment base on 802.11b/g/n standard. These could easily match with the latest technology to get better wireless performance and extended range.

Application Diagram



Performance Comparison



Product List

ANT1106
6dBi Omni-Directional Antenna
Part Number (STD): 91-005-225001B

- 6 dBi Omni-directional antenna for extended wireless signal coverage
- Compatible with 802.11b/g/n wireless devices that support SMA reverse connectors
- Allows desktop type and wall-mount type for flexible placement
- Easy to install, no software required

ANT1208
8 dBi Directional Antenna
Part Number (STD): Not available now

- 8 dBi Directional antenna for optimal signal coverage: could improve 240% distance than normal 2 dBi antenna
- Compatible with 802.11b/g/n wireless devices that support SMA reverse connectors
- Wide coverage: 120 degrees coverage brings less dead space
- Allows desk type and wall mounted type for flexible placement

Antenna products Matrix

Model	ANT1208	ANT1106
Product Name	8 dBi Directional Antenna	6 dBi Omni-Directional Antenna
Antenna Type	PIFA	Dipole
Application	Indoor	Indoor
Frequency and Bandwidth	2.4 GHz ~ 2.5 GHz	2.4 GHz ~ 2.5 GHz
Antenna Peak Gain in H-Plane	8.1 dBi	6.3 dBi
Antenna Radiation	Directional	Omni-directional
HPBW/H	120°	360°
HPBW/V	40°	35°
VSWR	2.0:1 Max	2.0:1 Max
Connector	SMA Male Reverse	SMA Male Reverse
Cable Type	LMR-100	LMR-100

4 Glossary

DLNA

The Digital Living Network Alliance (DLNA) is a group of personal computer and electronics companies that works to make products compatible in a home network.

HomePlug AV

HomePlug AV is a powerline technology standard. It offers physical layer data transfer speeds of up to 200 Mbps with actual throughput up to 100 Mbps. It was designed to support home multimedia requirements, so includes more QoS features than earlier standards. It also offers 128-bit DES security. While HomePlug AV compatible adapters do not interfere with the operation of adapters supporting earlier standards, they do not detect them and cannot form part of a network with them. HomePlug AV, like other HomePlug standards, forms networks based on a password, called the Network Membership Key (NMK).

LAN

A shared communication system to which many computers are attached. A LAN, as its name implies, is limited to a local area. LANs have different topologies, the most common being the linear bus and the star configuration.

MBM

ZyXEL's MBM (Media Bandwidth Management) allows you to allocate specific amounts of bandwidth capacity (bandwidth budgets) to outgoing traffic based on an application and/or subnet.

MIMO

MIMO (Multiple In, Multiple Out) is a radio signal distribution technique used in wireless networks. A MIMO wireless device possesses two or more antennas which process data simultaneously, increasing throughput.

VoIP

Voice over Internet Protocol is the converting of the voice signal to data (IP) packets and then sending the packets over an IP network.

WAN

WANs link geographically dispersed offices in other cities or around the globe including switched and permanent telephone circuits, terrestrial radio systems and satellite systems.

WEP

WEP (Wired Equivalent Privacy) encrypts data transmitted between wired and wireless networks to keep the transmission private

WPA

Wi-Fi Protected Access (WPA) is a subset of the IEEE 802.11i standard. It improves data encryption by using Temporal Key Integrity Protocol (TKIP), Message Integrity Check (MIC) and IEEE 802.1x. WPA uses Advanced Encryption Standard (AES) in the Counter mode with Cipher block chaining Message authentication code Protocol (CCMP) to offer stronger encryption than TKIP. WPA applies IEEE 802.1x and Extensible Authentication Protocol (EAP) to authenticate wireless clients using an external RADIUS database. See also WPA-PSK (WPA -Pre-Shared Key).

WPS

WPS (Wi-Fi Protected Setup) is an industry standard specification, defined by the Wi-Fi Alliance to allow you to quickly set up a wireless network between two devices, with WPA(2)-PSK security using either a button or a PIN.

WMM

Wi-Fi MultiMedia (WMM) is a part of the IEEE 802.11e QoS enhancement to the Wi-Fi standard that ensures quality of service for multimedia applications in wireless networks.

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